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Journal of the Society of Arts.

FRIDAY, NOVEMBER 2, 1855.

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PARIS EXHIBITION.

The Silks of Piedmont. Bombyx Cynthia.

(From *Le Commerce Sericole*, 17th Oct.)

In the gallery at the northern end of the great nave are the products of the Sardinian dominions, consisting of furniture, cloths, woollen and cotton fabrics, brushes, lace, clocks, and musical instruments. The Sardinian States, of which Piedmont forms one-half, are very fertile. Their natural productions consist of corn, wine, oil, rice, oranges, figs, and mulberries. Silk is there cultivated in abundance.

Many of the neighbouring towns, such as Turin, Nice, Coni, Alexandria, have sent silks both raw and organzine. The culture of silk forms the staple industry of these places. [The article then proceeds to give a short history of the introduction of silk, tracing its origin to the missionaries, who brought the eggs by stratagem from China, showing its first settlement in the Morea, from whence it travelled to Italy, about the time of the Crusades, the encouragement given by Henry IV. of France to the views of Olivier de Serres in opposition to the great Sully, and the regal ordonnances compelling landowners to plant mulberry trees by the side of all the high roads—their failure everywhere except in Touraine, where the climate permitted the trade to flourish, and its development there under Louis XIII., and its subsequent spread among the northern provinces.] At the present time this industry may be said to be completely naturalized in those parts, and the habits and wants of the insect are so well-known that it may with care be successfully raised in the northern provinces. [The article then proceeds to describe the transformation which the insect undergoes, stating that "every thousand worms consume fifty pounds weight of fresh leaves" from the moment of hatching to their death; and the treatment of the cocoons and chrysalides.]

The silks, both raw and organzine exhibited by the reelers of Piedmont are very fine. They are bright and lustrous, and the twist is strong. The number of exhibitors is considerable, amongst whom may be specially named Messrs. Pelisseri and Maucardia, of Turin; Mosca, Brothers, of Chiavazza; Dinegri, of Novi; Novellis and Bonelli, of Savellani; all of them owners of large establishments for reeling and for rearing the worms. Everything shows that the silk business is carried on to great perfection in the Sardinian states. Many of these establishments exhibit in their cases cocoons of various sorts, arising from different methods of treatment. Among them may be remarked the large cocoons, the produce of eggs from Libau; others originally from Broussa, and the very small cocoons known by the name of *tezzini*, from Florence. These *tezzini* appear to proceed from a cross breed with the larger sorts, and to be more specially cultivated in the Sardinian establishments. Messrs. Bellini (brothers), silk reelers, at Rivoli, exhibit the results of a curious experiment. For some time past, as is well-known, a great deal has been said about the introduction of a new silkworm, known by the name of the *Bombyx Cynthia*, which feeds on the leaves of the castor oil plant, is more hardy than the mulberry worm, and capable of living in the open air in the northern provinces without any care. Its silk is not so beautiful as that of the ordinary silkworm, but it is strong, of good quality, and is fitted, it is said, for a number of useful purposes. The Chinese make their more common garments of this silk; and the inhabitants of the East Indies use it even for making those *foulards* which are sold at so high a price. Messrs. Bellini were desirous of ascertaining how far all that was said of these new comers was true. They procured some of the eggs of the *Bombyx Cynthia*, hatched them, and fed the worms on the plant which forms its natural food. The result did not repay their trouble. They then attempted to improve the produce by a change of food, and they tried the worms, which they were endeavouring to acclimatise, successively with the leaves of the lettuce, the willow, and the chicory. The silk produced was nevertheless neither better, more beautiful, nor more abundant. It was coarse, thick, and of an earthy colour, wanting in elasticity and fineness. These experiments took place this year (1855), and are an additional proof how difficult, if not impossible it is, to effect acclimatisation, and what great changes in the nature of the animal and its products are caused by a change of country and those accompanying circumstances which escape our ordinary apprehension. Messrs. Bellini also exhibit in their case, side by side the produce of the new worm, several moths of this species. They appear to be of a much larger size than the common silkworm; their colour is of a greenish yellow, with many bands of white on the wings, and on the upper wings the spots are well marked. They more nearly resemble the *Paon de nuit*, but they are not so beautiful, and the radial markings are less distinct.

It is now a fitting time to examine whether these splendid silks of Piedmont are superior to those cultivated in France, such as Grenoble, Nimes, Aix, Lyons, Toulouse, and numerous other places in the northern provinces. For a long time this was thought to be so, looking only to the fact that silk and the insect producing it were originally from Asia, and that Sicily and Italy, after the Morea, were the first European states in which it had been successfully acclimatised. Since then, however, we have seen the production of silk extend northward with more or less success. England herself possesses silk-rearing establishments, which she is endeavouring to place in competition with those of Lyons.* This pretension, however, is not warranted. There must be a limit to the conditions of success. We may safely assert that our southern provinces are situated in the most favourable position for silk culture, and that our provincial silks are in no respect inferior to the silks of Piedmont. The art of silk-throwing has also there been brought to a higher degree of perfection. And further, it has been remarked, that worms raised in our climate are generally more vigorous, and less subject to sickness, than worms raised under a higher temperature. In accordance with this observation, many cultivators who at one time thought it necessary to keep their hatching-rooms at a temperature of from 18 to 20 degrees of Reaumur, have now adopted a rule of not heating them beyond 14 or 15 degrees; they have found it very successful.

Bombyx Cynthia.

Le Commerce Sericole of the 23rd of October, quoting from the *Annales de la Colonisation Algeriene*, after speaking of the splendid silks shown in the Algerian department, proceeds to notice the productions of the *Bombyx Cynthia* from this colony, in the following terms:—

"In a corner of the ground-floor may be seen the silk products obtained from the cocoons of the *Bombyx Cynthia*, raised in the central nursery of the colony. These products have been got up by M. Lepoutre-Parent, of Roubaix, who has found it necessary to card the cocoons like waste silk, being unable to wind them off, because the filaments of silk are not continuous, but are broken in the cocoon itself, due to the peculiar action of the insect in spinning it. The thread of the *Bombyx Cynthia* is far from attaining the value of other silk, owing to its colour, which is of a dull grey. It appears even inferior to the waste silk, which the manufacturer has placed side by side of it for convenience of comparison. If, notwithstanding this, fabrics of this silk are used among the people of China, it can arise only from the same cause that rye, barley, and oats form the nourishment of ten or twelve millions of French people who are too poor to obtain wheaten bread, a consideration which ought not to be lost sight of when it is proposed to introduce a foreign product on the sole ground that in another country it is in constant use."

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* The writer appears to be in error on this point. Silk cultivation on a large scale has hitherto failed in England.—**Ed.** Journal of Society of Arts.

SANITARY APPLICATIONS OF CHARCOAL.

Under this head, in the *Journal* No. 146, p. 695, in a letter signed "Nemo," reference is made to certain observations by Dr. Sutherland, Chief Sanitary Commissioner in the Crimea, in a letter addressed by him to the Earl of Shaftesbury, wherein the doctor throws great doubt on the value of charcoal as a disinfectant, referring to the case of the "Chester." The following remarks, specially referring to this point, are taken from a pamphlet by Mr. James Bird.* After quoting the passages from Dr. Sutherland's letter, as given in the *Journal*, Mr. Bird says:—

"To these remarks of Dr. Sutherland, the following extract from the *Pharmaceutical Journal*, affords, we think, a correct and conclusive explanation:

> "'It is certainly a very important question to be determined whether, and in what way, or to what extent, the offensive odour of decomposing organic matter is connected with infection. We agree with Dr. Sutherland, that the terms deodoriser and disinfectant ought not to be commonly used in connexion, as if the one effect necessarily followed the other. In fact, we know very little about infection, its real nature, and the *modus operandi* of those substances which have been found, or supposed to prevent contagion. It is generally considered that the poison of contagion is destroyed by a process of oxidation—a process similar to that by which offensive odours are usually got rid of. Admitting this, however, it does not follow that the two effects should be necessarily simultaneous.
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> "'Charcoal and lime are two of the best known substances for preventing the escape of offensive odours from decomposing organic bodies; but these two substances do not act in precisely the same way. The action of the charcoal in as far as the charcoal is itself concerned, is mechanical, that is to say, the charcoal does not enter into chemical combination with any of the elements present. On the other hand, the lime combines with some of the products of decomposition. But the sure, most active and efficient agent in destroying offensive odours, and also, as is assumed and generally believed, in destroying contagion, is atmospheric oxygen. Charcoal possesses the property, in a very high degree, of condensing gases upon its surface; and it is thus capable of bringing large quantities of atmospheric oxygen, in an active state, into contact with the noxious products of organic decompositions, and causing their destruction by an oxidising action. The action of sand or gravel would be somewhat similar to that of charcoal, but with this difference, that sand or gravel are deficient in that property which so remarkably distinguishes charcoal, of condensing gases on their surface. The sand or gravel acts simply as a porous mass, the interstices of which are filled with air; and the gaseous products of decomposition on passing through the mass, are minutely divided, and brought into intimate contact with atmospheric oxygen. Dr. Sutherland says, that a stratum of six inches thick of sand, placed over ground filled with decomposing bodies, entirely deodorised the soil. In this case, we have no doubt, the action of the sand was such as we have described.'

"Poisonous influence upon living animals is always proportionate to its degree of concentration; a resident within the limits of the Pontine marshes, would be much more liable to be affected by its malaria, than one whose habitation was some distance removed from them—constitution, temperament, and other conditions being similar in both individuals. A healthy person coming in contact with another individual afflicted with cholera, would be far less likely to imbibe the disease, than he would be if his intercourse extended to one hundred so circumstanced. Again, one patient in typhus fever or small pox, confined to a small ill-ventilated room, with little regard to cleanliness as respects raiment or bedding, would generate by concentration, a poison sufficiently virulent to infect every person who entered his room; while a hundred persons similarly diseased, in a large airy well-ventilated apartment, where cleanliness and other proper sanitary measures were duly attended to, might be visited with absolute impunity. Erisypelas, or gangrene, or fever, breaks out in one of the wards of a hospital, or union, or barrack, and all former experience has demonstrated that unless the case be immediately removed and isolated from other invalids, the disease rapidly extends from bed to bed, until first all the inmates of the ward and afterwards those in the whole building are attacked. Great mortality of course follows, and a disease is engendered by concentration again of so virulent, pestilential, and contagious a character, as to render it a matter of the utmost difficulty to subdue or eradicate it. A minute dose of arsenic may be taken as a tonic with the greatest benefit in neuralgia and ague, but concentrate those minute doses by mixing a dozen doses together, and you produce by such concentration a virulent poison. Hence it is clear, that large dilution in every instance, is the most certain and effectual method of destroying all kinds of contaminating influence, whether existing as animal, vegetable, or mineral poisons, or even in that subtle and insidious gaseous form as it emanates from the decompositions of either of the before-named substances. The dejections of one dysenteric or choleraic person, left to purify in the vicinity of a closely packed community of healthful persons, would be sure to do less mischief, than would result from the dejections of one hundred such invalids; and so would the sanitary condition of such congregated community be best promoted, were all the dejections removed, with as little delay as possible, from the vicinity of the spot upon which they are obliged to dwell. Cotton, wool, sand, ashes, saw dust, earth, gravel, will all absorb the odours consequent upon decaying animal or vegetable matter; but they will retain them unchanged, and become fully saturated thereby; and as the poisons generated by the putrid action of animal and vegetable matter are also self-generating, this saturation becomes sooner or later completed, and emanations more poisonous, because more concentrated than those originally infused into the interstices of the cotton, wool, &c., in the first instance, are evolved again with fatal consequences. Not so with Charcoal; whatever gaseous matter passes within its pores, there it is decomposed by the oxygen distributed in such large quantities over its minutest particles; and it is satisfactory to know, that these noxious gases are never again liberated in a pernicious form, and that except in the one solitary instance, where Charcoal is burnt destructively in a room perfectly closed from all access to the atmosphere, no inconvenience can ever result from its use.

"It must be obvious therefore, that early deodorising and disinfecting, and frequent and complete removal of all feculent matter from densely populated localities, is the primary and fundamental means of promoting health and of arresting the ravages of disease; and that without this, all other precautions are vain and ineffectual."

DECIMAL COINAGE COMMISSION.

(From the *London Gazette*, October 26, 1855.)

Whitehall, Oct. 25.

The Queen has been pleased to direct letters patent to be passed under the Great Seal, nominating and appointing the Right Honourable Lord Monteagle, of Brandon, the Right Honourable Lord Overstone, and John Gellibrand Hubbard, Esq., to be her Majesty's Commissioners for considering how far it may be practicable and advisable to introduce the principle of decimal division into the coinage of the United Kingdom.

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* The Medicinal and Economic Properties of Vegetable Charcoal, with Practical Remarks on its Use in Chronic Affections of the Stomach and Bowels. By James Bird, M.R.C.S., late Surgeon Royal Glamorganshire Militia.

UNDERGROUND MANURING.

In No. 113 of the *Journal*, 19th January last, p. 148, is an account of a method of underground manuring, advocated by Mr. E. Wilkins. Mr. Wilkins states the result of his experiments at Caversham as follows:—The examination took place about a week since, in the presence of Mr. Elliott, one of the Commissioners of Sewers of the city of London, several members of the Oxford Corporation, several gentlemen of this town, and Mr. Johnson, head gardener at Stratfieldsaye, the seat of the Duke of Wellington. A mangold wurtzel grown on the new system was found to be 26½ inches in circumference, whilst one on the old plan measured only 16½ inches; hops planted on the new system, were very strong in the bine, full of hops, and measured 20 feet high, whilst those on the old plan were only 14 feet high; two plants of grown potatoes, in earth, on the new system yielded 22lbs. 6oz., whilst the same number on the old plan weighed only 14½lbs.; 2 plants of ash-leaf kidneys, grown in one foot of sand from Mr. Collier's sand rock, on the new system yielded 10¾lbs. weight; old system, 5lbs.; one potatoe grown in this garden last year, and planted this year on the new system, produced 101 fine potatoes weighing together 24lbs.; one of these was 1lb. 3oz., and was grown in 8 inches of earth only. The beet root, peas, clover, Italian rye grass, rhubarb, &c., grown on the new system, greatly contrasted with that after the old plan. Mr. Wilkins afterwards exhibited the roots, &c., at the Town-hall, and entered into an explanation of his mode of culture.

Colonial Correspondence.

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THE COMMERCIAL RESOURCES OF BRITISH HONDURAS.

Belize, British Honduras, Sept. 17, 1855.

SIR,—In my last letter I stated, in reply to the question proposed by Mr. Hancock, whether caoutchouc might be cultivated in Jamaica or the East Indies, that the India rubber tree grew very plentifully in this country. I have since procured a specimen of the caoutchouc extracted from that tree, and I have now great pleasure in forwarding it to you. I do not know whether or not it will be considered to be of a good quality, but to me it appears not to be of so close a texture as that which I have usually seen. This, however, may not be owing so much to the nature of the material itself, as to the mode of extracting and preparing it. Be that as it may, it *is* veritable caoutchouc, and if not applicable to all purposes may be very useful for some. I am told that a good tree will produce at a time from three to four gallons. I have requested a merchant in Belize, who is engaged to a limited extent in mahogany cutting, to endeavour to make up his inevitable losses in that business, by bringing from his mahogany works all the caoutchouc which he can collect from the numerous india-rubber trees with which they are surrounded. He appears to be quite aware of the value of the suggestion, and being an American, he has—to use a nautical phrase,—his weather-eye always open. In fact, he is one of those true sons of Mercury who calculate and guess with considerable certainty where a penny may be turned.

The mahogany labourers commence their operations about six o'clock in the morning. They have a task set them, which they generally accomplish before noon; the rest of the day is their own, which they spend according to their several tastes. One man throws himself into his hammock and falls asleep, "the world forgetting, by the world forgot." This is a favourite pastime. Another man smokes his pipe, looks very meditative, and reflects upon nothing. Another takes his gun, a very fine, single-barrelled fowling-piece, which cost three dollars—twelve shillings sterling. This he loads, first with a double charge of powder, then with an inch of oakum, then with as much shot called BB. as will lie in the palm of his hand, and, lastly, with another inch of oakum, all which is rammed down with no child's arm. Verily miracles have not ceased. These guns never burst. I suppose they are warranted not to burst, and therefore don't. Having performed the operations above described, he next throws over his left shoulder a large canvas bag, the contents of which are various, and somewhat curious. First, there is a large bull's horn with a cork at the small end and a plug made of wood at the other. This contains his powder. Then the shell of a cahoun nut, neatly cut in two, curiously carved, and made to open and shut like a box. This is a snug receptacle for percussion caps. Then a canvas bag, drawing at the mouth with springs, and having printed upon it in large capital letters the word NAILS. This is the Bristol blue department. Then, a deerskin case, which rolls up, and is tied round with a thong, also made of deerskin. In this is deposited a considerable quantity of unmistakeable returns, or negro-head, with a flint and steel. Then, a short, black, venerable-looking pipe, the fragrance of which would have driven good King James out of his senses. Then, the shell of a young cocoa nut, with a hole at one end. This contains tinder, which is used for the purpose of lighting the said pipe. The rest of the articles are a gin-flask, a calabash of the shape and size of a breakfast basin, a roasted plantain, a piece of dried fish, and a case knife. The bag containing this elegant assortment, as I said before, he slings across his left shoulder, girds his waist with a leather strap, from which hangs a machete, holds his Manton with both hands behind his neck, so that he presents the appearance of a cross, and sallies out in quest of deer, peccary, gibbonet, curacou, qualm, armadillo, iguano, squirrel, monkey, or any other edible animal which fortune may throw in his way. Another man, more industriously disposed, shoulders his huge axe, fit to cleave the skull of a Titan, and proceeds into the bush in search of a small mahogany or cedar tree. Having found one suitable for his purpose he will fell it; then he will square it; then he will shape it into the form of a doug or pitpan, and then dub out the inside with an adze. Being finished, he will bring it down to Belize at Christmas, and sell it for fifteen or twenty dollars. Now, if all these men, instead of sleeping, smoking, shooting, &c., were to take all the demi-johns, gin-flasks, porter-bottles, calabashes, and every other vessel which they can lay hold of, and fill them with the juice of the India-rubber tree, they would not only be more healthfully, usefully, and profitably employed as regards themselves, but they would contribute to the prosperity of the country and to the wants of the British and other European markets. This I have urged upon the gentleman of whom I have above spoken.

I send you a small quantity of the bark of the *cinchona*. It was brought to me from Omoa, in the state of Honduras, in the neighbourhood of which town it grows. It is considered there to be equal to the Peruvian bark. On this point, however, I can give no opinion, but I am informed that an infusion of it is administered in intermittent fevers, with the same salutary effect as *quinine*. I do not know whether it is to be found in the British settlement, but I am strongly inclined to think that it may be, as it grows so plentifully in a neighbouring state. There is a species of *cinchona* in Jamaica, an account of which was given by Dr. Wright, in a paper which he published in the *Philosophical Transactions*. It was called by him *Cinchona Jamaicensis*. In Jamaica it is called the "sea-side beech." It also grows in the island of St. Lucia. This was treated on by Dr. Kentish, and called by him St. Lucia bark. [See Ency. Brit., ed. 1797.]

I have always thought that tobacco might be cultivated in Honduras with great success. In every part of this country the wild tobacco is as abundant as thistles in England—or even in Scotland. In an old edition of the *Encyclopædia Britannica*, I find under the title *Nicotiana*, the following statement:—

"There are seven species, of which the most remarkable is the *tabaccum*, or common tobacco plant. This was first discovered in America by the Spaniards, about the year 1560, and by them imported into Europe. It had been used by the inhabitants of America long before, and was called by those of the islands *yoli*, and *pœtun* by the inhabitants of the continent. It was sent into Spain from Tabaco [qy: Tabasco], a province of Yucatan, where it was first discovered, and from whence it takes its common name."

That part of British Honduras which lies between the Belize river and the River Hondo, is in the province of Yucatan. Formerly a very extensive trade was carried on between Havanna and Yucatan, the latter supplying that city with logwood, salt, deerskins, a fibre from which ropes and hammocks were and are still made, and likewise tobacco. When the planters in Cuba were able, by careful and skilful cultivation, to produce a better tobacco than that with which they had been originally supplied from Yucatan, that article ceased to be a branch of the trade. The Yucatecos, however, continued to cultivate tobacco for their own use, as well as an article of commerce with other countries. The cigars which are brought from Merida, the capital of Yucatan, are very excellent, and little if at all inferior to those exported from Havanna. In the whole of Yucatan to the north of the Hondo, there is a great scarcity of water, very few large rivers, and hardly any small streams. This want renders cultivation extremely precarious. But in that part of Yucatan which is now British Honduras, magnificent rivers, tributary streams, and broad lagoons abound. The Indians of Yucatan are called Maya Indians, and their language is called the Maya language. Wherever one of these people settles, one of the first things which he begins to cultivate is tobacco—"the narcotic odour of which," it has been said, "equally infatuates the ignorant savage and the intelligent philosopher." He is moved to this by two feelings—a religious sentiment, and a love of the soothing influence produced by the fumes of the burning leaf. Whatever Christianity may have done to humanise and enlighten the race of man by the Divine principles which she teaches—and she has done much—she has not succeeded in altogether rooting out of the minds of many of the savage inhabitants of this part of the world their ancestral superstitions, and a hankering after the false gods of their fathers. The Indian yet looks upon the tobacco plant as a special gift of the Deity, to solace him in trouble, to tranquilise him in prosperity, to teach him calmness of action and soberness of thought, and to fill him with soft, and gentle, and holy feelings. He thinks that when he kindles the dried and folded leaf that he is sacrificing to his god; that every puff of smoke is an incense of adoration; and that the stupor which steals over his senses is that heavenly calm enjoyed by blessed spirits, and which is wafted to him from the gates of Paradise on celestial airs. Until a very recent period, no person attempted to cultivate tobacco in Honduras, either for exportation or personal use. In 1848, the war broke out in Yucatan between the aboriginal Indians and the Spanish inhabitants, who are, in fact, a mixture of the old Spaniards and the Indian. This mixed people have the vices of both races, and the virtues of neither. They are cruel, revengeful, and the slaves of every gross and sensual appetite. They are as degenerate in their persons as in their minds. Very few of them are so much as five feet in stature. They have an oval face, sanguinary-looking lips, round, fleshy, sensual chins, low narrow foreheads, and large, dark, inexpressive eyes, except when under the influence of anger, and then they roll and flash with a demoniac lustre. Their figures are squat and unshapely, and given to obesity. Their hands and feet are remarkably small, and all their bones are fragile and delicate. Such is the Spanish Yucateco in appearance. These people have for many years treated the Indians with great cruelty, making them work like slaves, and putting them to death on the slightest provocation. One mode of tormenting these poor creatures, and one to which they often resorted, was called the "campaign stock." The Indian was thrown upon his back, his wrists were tied together below his knees, and the barrel of a gun was placed between his arms and his thighs. In the year 1850 it was my duty to try a man called Florencio Vega for inflicting this horrid torture upon a poor Indian labourer, called Juan Nepomucini Torres, in the British settlement. The following is what Torres stated:—"Some time ago, I was residing where Mr. Vega was residing, at New River. It is about three months ago. It was New River in this settlement. The name of the place was San Esteven. I was placed by Mr. Vega for eight hours in a campaign stock. My wrists were tied together and brought over my knees, and a gun-barrel was passed through my arms and under my legs. I was thrown on my back. I was placed in this position by Felipe Vega and Alonzo; This was done by order of Florencio Vega. Florencio Vega stood by, commanding the people to do it. I was released at 8 o'clock at night, by the request of several persons. I was placed in that position about one o'clock in the day. After they released me, they chained my leg to a post in a new house they were building, and I was kept there until the next day at three o'clock."

At last the patience of this most patient race was exhausted, and they rose *en masse* against the tyranny of their oppressors. The Indian is a much finer *animal* than the Spanish Yucateco, although *he* has got nothing to boast of. He is likewise diminutive, possessing small feet and hands, and delicate limbs; but the shape of his face is very singular. His portrait may be seen any day in the Egyptian department of the British Museum. His hair is long, straight, and of a raven black. His face is roundish, and his cheek-bones are very high. His lips are thick and projecting, his chin round and retreating, his nose slightly aquiline, and broad at the nostrils, and his eyes black, large, full, starting, almond-shaped, and almost hidden within the folds of a thick, heavy, sleepy lid. He always walks withhis toes turned inwards, and his feet are clothed with sandals, the antiquity of which is indisputable; the sole of this sandal is generally of wood, but sometimes it is made of thick bull's hide. It is fastened to the foot somewhat in the same manner as skates are, but the foot is naked, and a cord which passes through a hole at the end of the sole goes between the great toe and the one next to it. I have sent you a pair of the sandals, for I think they are rather curious. It is highly probable that they differ very little from those which were worn by the Phenicians and the ancient Egyptians, from whom I have no doubt these Maya Indians are descended.

The Indian, although a docile creature, is not deficient in courage. His Spanish oppressor, on the contrary, like all cruel and vindictive natures, is an arrant coward. When the Indians revolted, the town of Bacalar was the first place which they attacked. Bacalar is a moderate-sized and pretty-looking town, distant about 30 miles from the mouth of the Hondo, and situated on the margin of a beautiful lake, which is sometimes of a deep rich blue, sometimes a light azure, sometimes a bright emerald, and sometimes at sunset and sunrise it shines with alternate streaks of violet and crimson. Commanding this lake and the surrounding country is one of those large, dark, strong, frowning fortresses which the old Spaniards, in Ferdinand and Isabella's time, used to build to secure their conquests. This castle is built upon a high mound, partly natural, partly artificial, and is surrounded by a deep ditch, over which is a drawbridge. In 1847 there were in this stronghold several pieces of ordnance, a considerable quantity of cannon balls, and plenty of gunpowder. There were also at least a thousand muskets, two hundred of which, with percussion locks, were in excellent order, and were arranged in the armoury with great precision. Notwithstanding all this—the frowning turrets of the old Spanish Castle—the ditch, the drawbridge, the bristling cannon, the thousand stand of arms, the Indians, with nothing but old rusty swords, machetes, hatchets, muskets without locks, slings, and bows and arrows, took the castle by storm, and cut the throat of every Spaniard they could lay hold of. The greatest portion of the inhabitants fled with precipitation, collecting in the hurry of their hasty exodus a few trinkets which they huddled up with their clothes in bundles. They took refuge in Honduras. But the tide of war suddenly changed. Yucatan had previously declared its independence, but now, in the hour of peril, the Yucatecos acknowledged themselves to be subject to Mexico, and demanded assistance from that country. This was vouchsafed, a large armed and disciplined force was dispatched to Yucatan, and the Indians were driven from Bacolar with as much rapidity as they had before scattered their enemies. It was now their turn to fly, and they also chose Honduras as their city of refuge.

I have mentioned these circumstances to show how it came about that the cultivation of tobacco was commenced in this country. Upon the New River there is a large settlement formed by the Indian and Yucatan refugees. These people, living now peaceably together, rear poultry, and cultivate tobacco and Indian corn. I have sent you twenty-three cigars grown and manufactured by them. I abstain from pronouncing any opinion upon them, but I have not the slightest doubt that if care and skill were bestowed upon the cultivation of tobacco in this country, cigars might be exported from Belize, equal in every respect to those which are sent from Havanna. It is a fact not to be overlooked, that it was from Honduras and other parts of Yucatan, that tobacco was first imported into Cuba, and that the far-famed cigars of that island have an Honduras origin. I shall procure some of the leaf tobacco and send it to you, I hope, by the next packet.

By the last packet I sent you a specimen of the fibre of this country and Yucatan. I have now great pleasure in presenting you with an Indian hammock, made of a fibre similar to that which I forwarded to you.

I have the honour to be, Sir,
Your very obedient servant,
R. TEMPLE.

Home Correspondence.

DECIMAL COINAGE.—THE TENPENNY SYSTEM.

Sir,—Mr. Rathbone does not disprove my assertion that a *centesimal* ratio is found by experience to be preferable to a *decimal* one between moneys of account, while he assumes, as the *sine qua non* of a change, "that pence and tenpences should become our legal, and hence ordinary and usual form of account."

Now with reference to his scheme, which he describes as "the simplest and the most efficient and complete, as well as the easiest of execution that has ever yet been proposed," I think it may, on the contrary, with very little difficulty, be demonstrated that it is actually inferior to our old-fashioned £ *s. d.* mode.

Mr. Minasi has shown that the saving in figures by the use of the penny system in any form would not amount to one-half per cent. But a comparison of figures is not the only test that ought to be applied. In taking measures to simplify our currency, we should proceed on the supposition that the masses know nothing of written accounts, and are even unacquainted with the multiplication table. The loss or gain in facility of *mental* computation should accordingly be estimated, before deciding on the merits of any given system. Suppose, then, Mr. Rathbone himself, ignorant of accounts, and having to pay "17 tens and 6 pence," or "9 tens and 7 pence," with shillings and pence—his plan requiring, as he says, "no coins but the existing"—I should be glad to know how he would avoid the "troublesome duodecimal" division of 176 or 97, in order to find the number of coins wanted to make up the sum. I suspect that the increase of mental labour in this "invaluable" form of account, even when "confined to amounts and calculations below the £," would far more than counterbalance the half per cent. saving already mentioned, and that Mr. Rathbone would soon acknowledge the inconvenience of reduction to 14s. 8d. and 8s. 1d., and back again. Moreover, if it were possible to start to-morrow with no coins *but* tenpences and pence, his scheme, in my opinion, would prove impracticable, since, in reality, no advantage would accrue from making *ten* the ratio between moneys of account.

It does not appear to me that the introduction of arithmetical examples of the kind given by Mr. Rathbone is likely to do much, if anything, towards settling the question. Merchants, tradesmen, and others, have peculiar abbreviations in computation, adapted to the weights and measures of the commodities in which they mostly deal, and an expert arithmetician, as a merchant's clerk ought to be, would perceive at a glance that, in such a calculation as 31 tons 12 cwt. 2 qrs. 14 lbs., at £12 12s. per ton, £1 per ton gives a shilling per cwt. and 3d. per qr. He would, therefore, work it, so as to leave no advantage on Mr. Rathbone's side, thus :—

$$\begin{array}{rrrr} & \text{Tons.} & \text{cwt.} & \text{qrs.} \\ & 31 & 12 & 2\frac{1}{2} \\ & 1 & 1 & 3 \\ \hline & 31 & 12 & 7\frac{1}{2} \\ & & & 12 \\ \hline & 379 & 11 & 6 \\ \text{10s.} = \frac{1}{2}— & 15 & 16 & 3\frac{3}{4} \\ \text{2s.} = \frac{1}{5}— & 3 & 3 & 3\frac{3}{20} \\ \hline & \pounds 398 & 11 & 0\frac{9}{10} \end{array}$$

Mr. Rathbone's Method.

$$\begin{array}{rrrr} \text{Tons.} & \text{cwt.} & \text{qrs.} & \text{lbs.} \\ 31 & 12 & 2 & 14 \\ 20 & & & \\ \hline 632 & & & \\ 4 & & & \\ \hline 2530 & & & \\ 28 & & & \\ \hline 20254 & & & \\ 5060 & & & \\ \hline 70854 & & & \end{array} \qquad \begin{array}{r} \text{d.} \\ 7085{\cdot}4 \text{ at } 13{\cdot}5. \\ 13{\cdot}5 \\ \hline 354270 \\ 212562 \\ 70854 \\ \hline 12)\ 95652{\cdot}90 \\ \hline 20)\ 7971{\cdot}0\frac{9}{10} \\ \hline \pounds 398\ \text{11s.}\ 0\frac{9}{10}\text{d.} \end{array}$$

It would be a fairer comparison, however, for Mr. Rathbone to make his calculation at 302 *tenpences and* 4 *pence per ton,* than at 13·5*d. per* 10 *lb.* In any case, "the enormous saving of figures and labour" is purely imaginary, and had better be left out of the discussion altogether.

I remain, Sir, your obedient servant,
SAMUEL A. GOOD.

H.M. Dockyard, Pembroke Dock,
27th October, 1855.

SOCIETY'S LIST OF LECTURERS.

Sir,—The Committee of the Pembroke Dock Mechanics' Institute having seen Mr. Charles F. Partington's name and address in the Society's List of Lecturers, where he describes himself as lecturer to the Royal Panopticon, arranged for the delivery of a lecture on receipt of a prospectus bearing the same name and address. The result, as explained in the following notice from the *Pembrokeshire Herald*, was hardly fair towards either the Society of Arts or the Institute.

Yours obediently,
X. Z.

"Lecture at Pembroke-Dock.—The members of the Pembroke-Dock Mechanics' Institute were sadly disappointed on Monday and Tuesday evenings. The person who undertook to lecture on "The Resources of Modern Warfare," turned out *not* to be the Mr. Partington of the Royal Panopticon, who was expected, but his son or nephew, a young gentleman who in appearance is scarcely out of his teens. He occupied the time of the audience on the first evening by reading a dull prosy outline of the history of the Crimea and its invasion by the Allies, up to the fall of Sebastopol. His lecture was by no means enlivened by a stammering indistinct utterance and incorrect pronunciation. On the following evening he attempted to illustrate, with the aid of a few explosive chemicals, the principle of the Russian infernal machines, &c., leaving, however, his audience very little wiser on the subject than they were before. The Institute has unhappily not hitherto been very successful with its *paid* lecturers."—*Pembrokeshire Herald*, Oct. 26, 1855.

Proceedings of Institutions.

◆

Bradford (Wilts).—The Third Annual General Meeting of the Literary Institution was held on the 2nd of October. The report states that the number of subscribing members to the 31st of August, is one hundred and fifty five, paying £74 5s. 0d., of which £10 is from a new life member, £58 7s. 6d. from annual subscribers, and £5 17s. 6d. from half-yearly and quarterly subscribers. The treasurer's report shows a balance in the bank in favour of the society, of £55 2s. 11d. The lectures, as usual, have continued to be a source of great interest, and have been numerously attended. The reading rooms continue to be well frequented. The library has, during the past year, been increased by valuable presents and donations from Mrs. Wade Browne, the Rev. J. H. Bradney, the Rev. W. H. Jones, Mrs. Jay, and other friends. The issue of books during the past year has been 1,916, against 1,777 of the previous year. The meetings of the Mutual Improvement Class have been well attended, and the increased number of its members indicates a growing interest in its proceedings.

Bury St. Edmunds.—A bazaar was held on the mornings of Tuesday, the 2nd, and Wednesday, the 3rd of October, and on the evening of Friday, the 5th, in the lecture-hall of the Athenæum. The ladies who presided at the stalls, &c., were:—Lady Arthur Hervey, Lady Manners, the Hon. Mrs. Pellew, Mrs. Bennet, Mrs. Dennis, Mrs. Greene, Mrs. Ion, Misses Michell, Mrs. Ord, Mrs. Smith, Mrs. Deck (with Messrs. Walsham and Oakes), Miss Ramé, and Mrs. Youngman (with Miss Warren). The whole sum collected was £748 11s. 4d. The expenses amounted to £83 10s. 5d., leaving a balance of £665 0s. 11d. The council have disposed of this sum as follows:—To the library committee, for new books, £100; to the committee of archæology and natural history, £100; to the immediate payment of 45 loans of £10., £450; and the balance of £15 0s. 11d. towards additional lighting of the lecture-hall. In addition to the nine loans of £10 each, payable under the deed of trust, it has been determined that forty-one loans, making a total of £500, be now paid off according to numerical order, unless otherwise desired by the parties entitled to priority, thereby reducing the charge on the Athenæum to £2,200, and that such payments be taken in relief of the annual instalments of the debt as far as may be found necessary, provided that the sum considered as liquidated by this payment shall not exceed £50 in any one year, or £90 in two consecutive years. Besides rendering an account of the sum realised and the mode of its appropriation, the council return their most sincere and grateful thanks to the bazaar committee, to the Lady Arthur Hervey, to the ladies committee, and to the ladies who presided at the several stalls. These were well provided by the liberality of the friends of the Athenæum, as the receipts show, and every stall was entirely cleared of its stock of ladies' work. The reason of the expenses being so small was owing to the tradesmen of the town having generously given their gratuitous services and gratuitous materials for preparing and decorating the hall for the bazaar. The council express the hope that the greatly increased strength of the Institution, arising from such an increase both of friends and of funds, will have the effect of conciliating to it yet further support, and attracting to it the cordial union of those who have hitherto stood aloof.

Chichester.—The annual report of the Literary Society and Mechanics' Institute, the present number of members of which is 415, after speaking of the results of the concert given last winter in the Assembly Rooms, which was attended by about 400 persons, and increased the funds of the Institution by £8 18s. 6d., proceeds to speak of "the crowded audiences in the lecture-room, the numerous visitors to the museum, and the great demand for books from the library." In regard to the museum, the report observes, "that some Roman coins, and other antiquities, lately presented by the dean and chapter, are, in consequence of having been dug up in this city, of particular interest; for although specimens in any of the branches of natural history, or of the productions of human talent and ingenuity, wherever they may be found, are very acceptable, yet such as may contribute to illustrate the topography or history of this interesting locality, should be held in especial estimation by the managers of this Institution. The collection of local objects is already perhaps as extensive as in any provincial museum in Britain." The number of persons who have visited the museum during the past year has been 1344, of whom 220 were members. The success which has attended the Polytechnic Exhibitions at Brighton and Worthing, has led the committee of the Literary Society to suggest that at no distant period one of a similar kind may be held in connexion with that Institution. The donations to the library have scarcely reached the usual average, but the issues have amounted to 5000 volumes. The annual statement of accounts gives the total receipts of the year as £262 0s. 7d., and the current expenditure as £247 4s. 0d., but as at the termination of the preceding year there was a balance due to the treasurer of £25 5s. 4d., the difference in the receipts and expenditure of the present year only in part meet this deficit, the balance still due to the treasurer being £10 8s. 9d. The report states that this extra expenditure was incurred in providing new glass cases for important portions of the museum.

Dumfries.—The lecture-session of the Dumfries and Maxwelltown Mechanics' Institute was opened on the evening of October 9th, by Mr. Ewart, M.P., in an address on Mechanics' Institutes, and the benefits arising from them and other educating agencies. The chair was taken by Dr. Browne, president of the Institute. Mr. Ewart, after alluding to the prosperous state of the Institution, said that it was a favourable opportunity of taking a review of such Institutions, as the working classes were rising in intelligence. He quoted the words of Dr. Lyon Playfair as to the Central School of Science in London, stating that the "600 working-men's tickets were eagerly taken. The regular attendance of the working classes, the attention with which they listen, the copious notes which they make, are in all cases remarkable." The hon. gentleman then traced the origin of Mechanics' Institutes from the time of Dr. Birkbeck, the foundation of the Institute of London under Lord Brougham and others, and noticed the objections made to them. It was said they were not the institutes of mechanics, but they were becoming more so every day. The uncertainty of their funds was an objection. They had not been sufficiently self-supporting; this was undoubtedly true. He remembered instances where, in societies for promoting a knowledge of the arts, the arts themselves were put under an execution, the casts were confiscated, and the Apollo Belvidere went to the highest bidder. But they were now far better managed, and more nearly self-supporting. The want of a system of union had been objected. The hon. gentleman traced the attempts to form unions of such institutions: the Yorkshire Union, the Cheshire Union; lastly, the union proposed by the Society of Arts. That body had also proposed a system of classes and examinations. He feared that great difficulties would attend the latter system. Meanwhile, the government had extended its operations in a similar direction. A parliamentary committee, which he (Mr. Ewart) procured in 1836, had recommended that, for promoting a knowledge of the arts among the working-classes, a normal school of masters should be formed in London, to supply teachers for self-supporting schools of design in the provinces. This system was at length about to be adopted. It would, no doubt, be extended also to schools of science as well as schools of art. His doctrine was, that the government should interpose, but not interfere. The local administration of such institutions should be in the local authorities. On such terms only ought institutions to accept the aid of government, if offered. There was no doubt, however, that, though government ought not to "encumber them with help," it might greatly assist them. He was far from desiring to see adopted the protecting interference of foreign countries. But we might with advantage introduce some of their modes of instruction. He adverted to the advantage derived by the foreign mechanic from such institutions as the *Gewerb. Institut* at Berlin, and the *Conservatoire des Arts and Métiers* at Paris. He also adverted to the advantages given to workmen in the United States, and to the Reports of Messrs. Whitworth and Wallis on the Industrial Exhibition at New York. It was insulting the British mechanic to suppose that he should be brought up a mere machine. He had a right to enjoy larger views. Refinement and education would increase his value, and raise his position. He ought to equal or surpass the foreigner in the cultivation of the intellect, as he did in the energy of labour. The hon. gentleman then alluded to what might be called collateral institutions. Having been requested to advert to free public libraries, he stated that, having procured a committee on public libraries, after a committee on the arts, he had been asked, together with his friend Mr. Brotherton, first to introduce a bill for enabling towns to establish museums, adding to them rooms for science and art. Power was given to raise a rate for the purpose. The power was permissive. But about twelve towns had already adopted it—Manchester, Liverpool, Oxford, Cambridge, Salford, Sheffield, Warrington, Kidderminster, Bolton, and others. At Manchester, whence he had just come, he found that 250 daily readers frequented the noble library established there; and the same proportion at Liverpool, Salford, and other places. Books were also lent out to the resident population in large numbers. At Liverpool they proposed to raise a magnificent building; at Norwich another. Altogether 90,000 volumes had been added to the public use in these libraries. The result was the more satisfactory, as the bill, when introduced in Parliament, met with great opposition. They appeared inclined to accost him there as a well-known character was accosted by Jack Cade and his followers, in the play of Shakspeare: "Thou hast traitorously corrupted the youth of this realm by the foundation of a grammar-school." However, the bill was passed, and its end would, he believed, be satisfactorily attained. The hon. gentleman then adverted to the hopes and fears which attended the introduction of a national system of education, and to the immense benefits conferred by their ancient system of education in Scotland. He was desirous of seeing it enlarged and improved. He also adverted to the advantage given to poor scholars in the Scottish universities. They might all become learners by lodging cheaply and freely in the town. By the less liberal system of England (though it was not so formerly) the student must undergo the costs of being a member of a college in his university. But whatever advantages were given, a man's education in these times lay principally with himself. His own independent pursuit of knowledge was better than a system of drilling, which often narrowed and enfeebled the mind.—Major Scott, of the Dumfriesshire Militia, begged to propose a vote of thanks to Mr. Ewart, which was seconded by the Rev. Mr. Goold. The Chairman, in a few forcible and eloquent observations, conveyed the vote of thanks to Mr. Ewart; which the hon. member briefly acknowledged.

Liverpool.—Two courses of public lectures have lately been delivered at the Collegiate Institution. The first, on "Vegetable Growth in its Connection with Art," by Mr. C. Dresser, of the Department of Science and Art; the second, on "Textile Materials," by Mr. T. C. Archer, who has published some of the botanical diagrams of the same department. The former course of lectures was specially connected with the School of Art lately established at the Collegiate Institution.

Much Wenlock.—The fourteenth annual meeting of the Reading Society was held on Friday, the 19th of October. Mr. M. G. Benson, the president, took the chair. The report commenced by observing that the present rate of subscription to the reading room, considered apart from the lending library, was altogether inadequate. It was therefore proposed to double the subscription, making it 10s. instead of 5s. It was also proposed to revert to the original annual subscription of 6s. to the lending library, the reduction of 1s., made as an experiment, not having been followed by any increase in the number of subscribers. The committee, finding so few names of journeymen, mechanics, day labourers, and domestic servants, on the list of subscribers, suggested that certain publications should be set aside for their use on the payment of 1s. half-yearly, in advance. This, it was stated, was now rendered practicable by the great accession to the library during the last few years. A working-men's reading-room was likewise proposed to be established; the subscription to be fixed at 1s. half-yearly. The report then went on to speak of the great desire of many young persons in the neighbourhood for instruction in drawing, and expressed the hope that the neighbouring institutions of Coalbrookdale, Madeley, Broseley, and Bridgnorth, would unite with Wenlock, so that a salary might be secured sufficient to obtain a master from the Board of Trade (Department of Science and Art), who could visit each institution in succession once a week. The committee congratulated the members on the extension of the corn market, which will give increased facilities for exhibitions of agricultural and horticultural produce, and the erection over such extension of a room to communicate with the present reading-room. This will be useful for a museum of objects of local interest, as well as for drawing, music, and other classes, whilst the reading-room can be used for concerts, lectures, or other public meetings. The Olympic class, instituted for the encouragement of athletic exercises and the reward of intellectual merit in young persons, continues to increase in prosperity. The subscriptions amounted in the year to £22, of which the sum of £11 5s. was distributed in money and book prizes to competitors in public games at the meeting held on the race-course on Wednesday, September 12th; £2 in book prizes for proficiency in writing, reading, arithmetic, recitation, and plain sewing; and £6 15s. in incidental expenses. The Philharmonic class has saved £18 15s., and received promises of donations to the amount of £13, making a total of £31 15s. intended to be applied in the purchase of a piano, as soon as the amount reaches £50. Considerable additions have been made during the year to the society's collection of dried plants, 300 specimens of which, all collected in the neighbourhood of Wenlock, were exhibited on Friday, September 14th; 300 more would have been shown had there been sufficient space. Miss Brookes, of Cressage, has presented to the Society several specimens of rare and interesting native plants, moulded in wax, and has promised to make additions to this collection next year. In the department of Local Antiquities the committee record a most valuable donation made to the Society by Thomas Mytton, Esq., of Shipton-hall, viz., the Deed of Naturalisation of the Priory of Wenlock, anno 18 of Richard II. 1695. There has also been presented to this department, a small brass bell, found in the north transept of Wenlock Abbey; models of Shropshire public seals, in gutta percha; an engraving of Charles I. (to whom the borough of Wenlock owes its second charter) taking leave of his family; four views of the abbey; Spanish, French, and English coins (one of Cromwell); and six oak trays, in compartments, for the collection of coins. During the year many interesting autographs of distinguished personages have been added to the Society's collection. The financial statement gave the following results: amount of members' subscriptions, £42; amount of expenditure, £50 18s. 3d.; leaving a balance against the society of £8 18s. 3d. The various propositions for altering the rules of the Society, &c., contained in the report were, after some discussion, adopted. M. G. Benson, Esq., was unanimously re-elected president of the society; and the following committee was appointed to see the new building carried out: M. G. Benson, Esq., Sir G. Harnage, Bart., W. P. Brookes, Esq., Rev. R. G. H. More, Rev. N. Heywood, Messrs. Burd, Blakeway, Horton, Phillips, Amphlett, and Hinton. In connection with this part of the proceedings it was stated that it was intended to begin the new building, next spring. The estimated cost of the building is £300, of which sum £160 has been subscribed. Previous to the annual meeting there was held an adjourned meeting of the Olympic class for the purpose of distributing prizes to the boys and girls belonging to Wenlock schools, and others in the neighbourhood, for the greatest proficiency shown in arithmetic, reading, writing, and recitation, and (to girls) for the best plain sewing done in the shortest time. The Rev. N. Heywood presided over the examination, and with him were associated as judges, W. P. Brookes, R. C. Blakeway, and G. Burd, Esqrs., and Mr. James. It appears that this Institution owes its origin to the honorary secretary, Mr. W. P. Brookes, who has for fourteen years been its life and soul, and conducted its operations with energy and earnestness to which its present successful condition is mainly attributed.

PLYMOUTH.—The half-yearly meeting of the members of the Mechanics' Institute was held on Monday evening week, in the Hall of the Institute,—John Edmonds, Esq., presiding. The attendance was very limited; but it would appear from the report of the committee, that the institution is in a flourishing condition,—the names of upwards of 1000 persons being enrolled in the society's books, and a balance of £130 in the treasurer's hands. So favourable, indeed, is its progress, that a very considerable amount, in liquidation of loans on the building, has been set apart by the committee, which will reduce the debt to about £1,600. It was also stated that a valuable addition would shortly be made to the Institution, of the complete series of volumes issued from the Patent Office, London. These works having been offered to the town, on condition of a room being provided for public reference to their contents, a communication was made to the municipal authorities, on the part of the Institute, offering to provide the necessary accommodation. This proposal has been accepted; and the collection will doubtless prove of great value to those interested in mechanical and scientific pursuits. The report, after discussion and a few suggestions from one or two members present, was received and adopted. The election of six members to act on the committee in the room of those who retired by rotation, was then proceeded with; and thanks having been accorded to donors of books and periodicals to the Institution during the past half-year, and to Mr. Edmonds, for his conduct in the chair, the meeting separated.

ROMFORD.—In the month of August last a rural *fête* was held in connexion with the Literary and Mechanics' Institution, whith afforded enjoyment to nearly 2,000 persons, and secured a profit to the institution of £100. Of this £50 has been invested, in the hope that eventually a sum will be raised sufficient to erect a building for the meetings of the Institution. The great success which attended the *fête* has encouraged the committee to appeal to the friends of the Institution for their permanent support, by becoming subscribers to its funds. There is also a strong desire to act upon the suggestion of the Rev. W. Taylor Jones, M.A., viz., to encourage healthy out-door recreation during the summer months, and make it one of the features of the Institution.

To Correspondents.

The Secretary has received a letter from Dr. J. E. Gray, in reply to one from Mr. Theodore Rathbone, which appeared in the *Journal* of the 12th October. This will appear next week.

MEETINGS FOR THE ENSUING WEEK.

MON. Royal Inst., 2. General Monthly Meeting.
Architects, 8. 1. Mr. W. Tite, M.P., "Remarks on the Present Condition and Future Prospects of Architecture in England." 2. Mr. J. W. Papworth, "Considerations upon some of the Objects connected with Architecture in the Exposition des Produits de l'Industrie, at Paris, 1855."
TUES. Syro-Egyptian, 7½. Dr. Benisch, "Hebrew transcript and translation in English, with remarks, of the Phœnician Inscription lately discovered at Sidon, by Rabbi Isidor Kalisch, compared with the original inscription and with other Hebrew transcripts and English and German translations."
WED. Geological, 8. 1. Mr. Godwin-Austen, "On the Newer Tertiary Deposits of the Sussex Coast." 2. Mr. Poole, "Report on the Coal of the North-western districts of Asia Minor."

PATENT LAW AMENDMENT ACT, 1852.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[*From Gazette October 26th*, 1855.]

Dated 20th June, 1855.
1405. W. C. Holmes, Huddersfield—Gas.
Dated 21st July, 1855.
1650. A. Tooth, 14, Mincing-lane—Curing flesh and hides of animals in an entire state.
Dated 21st August, 1855.
1890. G. Lewis, Leicester—Gloves.
Dated 15th September, 1855.
2081. P. F. Wohlgemuth, 57, New Bond-street—Bridges.
2083. H. Chandler, Birmingham—Roasting-jacks.
2085. D. Hill, Tipton—Material for resisting fire in furnaces, &c.
2087. G. Hamilton, Great Tower-street—Weighing apparatus.
2089. L. D. B. Gordon, Abingdon-street—Electric telegraphs. (A communication.)
Dated 17th September, 1855.
2093. U. Scott, Duke-street, Adelphi—Vehicles.
2095. E. Gibbs, Wolverhampton—Picture-frames, vases, busts, &c.
2097. N. Turner, Chorley—Gold wire and gold plate.
2099. G. Copland, Liverpool—Fluid compound for destruction of bugs, &c.
2101. J. H. Destibeaux, Paris—Waterproof fabric.
2103. C. T. and E. B. Bright, Liverpool—Electric telegraphs.
Dated 18th September, 1855.
2105. I. J. Halcome, Cambridge—Skeleton maps.
2107. P. G. Barry, Gray Town, France—Obtaining products from bituminous shale, bog-head mineral, &c.
2109. A. V. Newton, 66, Chancery-lane—Paddle-wheel. (A communication.)
2111. J. Willis, Cheapside—Umbrella and parasol furniture.
Dated 19th September, 1855.
2113. G. A. Biddell, Ipswich—Railway crossings.
2115. W. R. Lomax, Hammersmith—Steam engines.
2117. J. H. Linsey, 12, Pilgrim-street, Ludgate-hill—Account and other books.
Dated 20th September, 1855.
2119. J. Page, Perth, and W. Robertson, Dundee—Moulding or shaping metals.
Dated 21st September, 1855.
2121. A. Lees and J. Clegg, Oldham—Looms.
2123. G. S. Parkinson, 14, Devonshire-terrace, Kensington—Railway breaks.
Dated 22nd September, 1855.
2125. W. Pollitt, Clayton-le-Dale, and J. Eastwood, Blackburn—Apparatus for churning milk and mixing liquids.

Dated 24th September, 1855.

2134. J. Musto, Cambridge-road, Mile End, and F. Bear, 43, Northampton-street, Mile End—Tobacco machinery.

Dated 1st October, 1855.

2184. W. Kempe, Leeds—Machinery for raising pile on fabrics.

Dated 10th October, 1855.

2262. T., W. A., and G. Fairbairn, Manchester—Casting ordnance.
2264. W. E. Newton, 66, Chancery-lane—Flour-dressing machinery. (A communication.)
2266. T. Oddie, and W. and J. Lancaster, Preston—Looms.
2268. D. Hébert, Paris—Heating and arranging ovens. (A communication.)

Dated 11th October, 1855.

2270. R. R. Reinagle, 12, King William-street, Strand—Barrows, hand-trucks, &c.
2272. J. Gilpin, Leeds—'Raising gig.'
2274. W. Bayley and J. Quarmby, Stalybridge—Carding machines.
2276. W. B. Adams, 1, Adam-street, Adelphi—Woodworking machinery.
2278. R. A. Tilghman, Philadelphia—Treating fatty and oily substances.

Dated 12th October, 1855.

2280. F. Puls, Soho-square—Electro-coating metals.
2282. T. Moore, Retford—Corn mill.
2284. C. Ward, 36, Great Titchfield-street—Clarionets.
2286. J. Livingston, Leeds—Permanent way.

Dated 13th October, 1855.

2288. J. S. Cockings and F. Potts, Birmingham—Sockets for whips and candles.
2290. G. A. Thibierge, Versailles—Chlorine.
2292. W. G. Eavestaff, Great Russell-street—Pianofortes.
2294. J. Moseley, Birmingham—Machinery for cleansing linen, &c.
2296. G. T. Bousfield, Sussex-place, Brixton—Power looms. (A communication.)
2298. G. T. Bousfield, Sussex-place, Brixton—Looms for weaving wire fabrics. (A communication.)

Dated 15th October, 1855.

2300. C. Leftwich, 21, Munster-street, Regent's-park — Water-closets.
2302. T. W. Dodds, Rotherham—Firearms, and ordnance, and projectiles.
2304. R. Benton, Birmingham—Motive power by leverage.
2306. E. A. L. Negretti and J. W. Zambra, Hatton-garden—Mercurial meteorological instruments.

Dated 16th October, 1855.

2308.—G. Thompson, Glasgow—Steam engines.
2310. W. Church, Birmingham—Ordnance.
2312. J. Forrest, Dears'-place, Somers-town—Extracting metals from their ores.
2314. T. A. Claeijs, Bruxelles—Corks and bungs.

Dated 17th October, 1855.

2316. W. Crossley and S. Beaumont, Hulme, Manchester—Cement.
2318. J. H. Clément, Paris—Railway break.
2322. E. Mackiniay, Glasgow—Reeling apparatus.
2324. W. H. Walton, Glasgow—Carding machine.
2326. I. J. Halcombe, Cambridge—Gates.
2330. T. Taylor, Manchester—Extinguishing fire.
2332. T. R. Harding, Leeds—Combs, gills, and hackles.

INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

2345. W. Basford, Penclawdd, Glamorgan—Purification of coal-gas and obtaining a residuum.—19th October, 1855.
2362. P. A. Leroux and L. R. Martin, Paris—Combining a resinous matter with oils or fatty bodies, in order to obtain various useful products therefrom.—22nd October, 1855.

WEEKLY LIST OF PATENTS SEALED.

Sealed October 26th, 1855.

945. Auguste Edward Loradoux Bellford, 32, Essex-street, Strand—A new combination of slide valves and ports for the induction and eduction of steam or other elastic fluid in steam-engines, or other engines of similar character.
951. Thomas Page, Middle Scotland Yard—Improvements in ordnance.
957. Richard Clark, Strand, and John Thomas Stroud, Suffolk-street, Birmingham—Improvements in lighting, applicable to table, street, signal, and other lamps, as also for the constructing, denoting, and regulating the signals and burners of lighthouses.
959. Daniel Warren, Exmouth—Improvements in obtaining and applying motive power.
976. James Edward Boyd, Hither Green, Lewisham—A 'ship's course indicator' or exhibitor, for the purpose of exhibiting to the helmsman and others in a legible manner the course which a ship is to steer, as well as for certain improvements in ship's compasses.
980. Robert Adcock, Wolverhampton—Improvements in the purifying processes of alcoholic liquids.
988. Marie Amédié Charles Mellier, 47, Rue de Seine, St. Germain, Paris—Improvement in the manufacture of paper.
1002. Robert Midgley, Salterlee Mill, Halifax, and George Collier, Halifax—Improvements in preparing yarns for weaving and other purposes.
1022. James Lewis, Holborn—Improved soap.
1030. John Allin Williams, Baydon, Wilts—Improvements in machinery or apparatus for driving or actuating ploughs and other implements employed in working and cultivating land.
1034. Jules Joseph Imbs, Brumath, France—Improvements in manufacturing cartridges or cases for containing charges for fire-arms.
1054. Matthew Allen, Worship-street—Improved valve, particularly applicable for regulating the supply of air to furnaces and fire-places.
1058. Charles Jared Hunt, The Willows, Mitcham—Improvements in tug and other hooks.
1078. William Dray, Swan-lane—Improvements in the manufacture of frames for all kinds of structures, together with the means of fastening the same when necessary, part of which is applicable to the manufacture of screws and bolts.
1114. Alexandre Maximilien Mennet, Paris—Improvements in ornamenting textile and other fabrics.
1146. John Mahon Murton, 3, Somers-place-west, St. Pancras—Improvements in sister hooks and thimbles for ships and boats' riggings, such improvements or parts thereof being applicable also to other purposes where hooks are required.
1188. John Allen and William Allen, Wallsend, near Newcastle-on-Tyne—Improvement in applying heat to alkaline solutions and to drying and making alkaline salts.
1318. Cromwell Fleetwood Varley, 1, Charles-street, Somers-town—Improvements in electric telegraphs.
1854. Francis May, Tooley-street, Southwark—Improvements in obtaining instantaneous light. (A communication.)
1894. Lucius Paige, Vermont, U.S.—Improvements in brake mechanism for railway carriages.
1910. William Denton, Addingham, Yorkshire—Improvements in drawing wool and other fibrous substances off the combs of combing machines.
1944. Alfred Vincent Newton, 66, Chancery-lane—Improvements in separating substances of different specific gravities.
1946. Benjamin Moore, New York—Improvements in sewing machines.

Sealed October 30th, 1855.

965. Edward Acres, Pouldrew Mills, Waterford—Improvements in desiccating and cooling atmospheric air, and the application thereof to useful purposes.
969. Henry Francis, 456, West Strand—Improvements in manufacturing boots and shoes.
973. William Eassie, Gloucester—Improvements in machinery or apparatus for stopping or retarding railway trains.
975. William Hartley, Bury—Improvements in safety valves, and in apparatus connected therewith, applicable also to regulating the flow of steam for other purposes.
985. Samuel William Campain, Deeping Fens, Lincoln—Improved machinery for filling corn and other sacks.
997. Jean Pechgris de Frontin, Agen, France—The use of a new material in the manufacture of paper and pasteboard.
999. John Hamilton, junior, James street, Liverpool—Improvements in the construction of iron girders.
1003. Joseph Beaumont, Elland, York—Improvements in treating wheat meal obtained in the manufacture of flour.
1011. Henri Marquis de Balestrino, Genoa—Improvements in obtaining motive power by the aid of explosive gases.
1019. John Henry Johnson, 47, Lincoln's-inn-fields—Improvements in hair and other pins used as dress or ornament fastenings. (A communication.)
1025. Joseph Hughes, White Hall Mills, Chapel-en-le-Frith—Improvements in the manufacture of paper.
1029. John Henry Johnson, 47, Lincoln's-inn-fields—Improvements in machinery or apparatus for the manufacture of paper tubes to be employed in connection with spinning machinery. (A communication.)
1031. James Bowron, Tyne and Tees Glass Works, South Shields—Improvement in the manufacture of glass tiles.
1035. Thomas Williams, 14, Red Lion-street, Clerkenwell, and John Hobson Fuller, New Brentford—Improvements in wrenches, pliers, and spanners.
1049. Charles Mertens, Gheel, Belgium—Improvements in breaking and scutching flax, hemp, and other fibrous matters, and in the machinery employed therein.
1059. Joseph Hallam, Sheffield, and John Elce, Manchester—Improvements in the construction of rowels or toothed cylinders for self-acting temples and other purposes.
1065. James Steele, Greenock—Improvements in effecting the drainage of moulded sugar.
1071. John Herdman, Belfast—Improvements in the manufacture of wrought iron plates adapted for ship-building and other purposes, for which strength and lightness are required.
1085. Robert McConnel, Glasgow—Improvements in beams or girders for building or structural purposes.
1105. Charles William Siemens, John-street, Adelphi—Improvements in cooling and in freezing water and other bodies.
1131. Paul Firmin Didot, Paris—An improved process of bleaching paper-pulp, textile fabrics, and other substances or matters.
1173. George Walker Muir, Glasgow, and Matthew Gray, Bonhill, Dumbarton—Improvements in admitting and regulating the admission of air to furnaces.
1181. Edwin Haseler, Wolverhampton—Improvements in frames for pictures, drawings, engravings, and other similar articles.
1183. Alexander Melville, Baker-street, Portman-square—Improvements in breech-loading firearms, and in projectiles used therewith.
1224. Jean Baptiste Acklin, Paris—Improvements in the mode substituting paper for pasteboards in jacquard looms.

1337. William Armitage, Manchester—Improvements in the manufacture of union bags and sail cloth.
1343. Henry William Ford, Gloucester—Improvements in machinery or apparatus for effecting agricultural operations.
1383. William Little, Strand—Improvements in printing machinery.
1455. Thomas Beatt Sharp, Manchester, and Alexander Yorston, Belfast—Improvements in the arrangement and construction of furnaces or fireplaces.
1467. Thomas Swinburne, South-square, Gray's-inn—Improvements in machinery for applying and obtaining motive power, applicable, but not exclusively so, in the propulsion of vessels and railway trains.
1527. Christian Friedrich Werner and Ludovicus Piglhein, Hamburg—Improved manufacture of elastic stuffing for chairs, couches, and other articles requiring the same.
1551. Julius Jeffreys, Kingston-hill—Improvements in sun blinds or solar screens.
1625. John Pretty Clark, Leicester—Improvement in the manufacture of metallic reels.
1653. Edward Myers, Rotherham—Improvements in buffers and other springs for railway and other carriages.
1671. Louis Antoine Ritterbandt, Warwick-street, Regent-street, M.D., and Joseph Bower, Hunslet, near Leeds—Improvement in the manufacture of manure.
1683. Richard Polkinhorn Huthnance, Chipping Norton—Improvements in drying, and in apparatus to be used therein.
1691. William Weallens, 12, Elswick-villas, and George Arthur Crow, Forth-street, Newcastle-on-Tyne—Improvements in steam engines.
1739. Joseph Robert, Liege—Improvements in machinery for manufacturing firearms.
1743. John Clarke, Leicester—Improvements in machinery for making loop fabrics.
1751. Rudolph Bodmer, 2, Thavies-inn, Holborn—Improvements in rotatory steam engines. (A communication.)
1755. Henry Hough Watson, Bolton-le-Moors—Improvements in the manufacture of coke.
1773. Edward Hall, Dartford—Improvements in the manufacture of gunpowder.
1787. John Henry Johnson, 47, Lincoln's-inn-fields—Improvements in the manufacture of india-rubber. (A communication.)
1799. John Sidebottom, Broadbottom, Chester—Improvements in shuttles and in skewers for shuttles and other purposes.
1803. Alonzo Webster, Vermont, U.S.—Improvement in machinery, by which a horse may be suddenly disengaged from a carriage while running away with the same, or whenever required to be detached from it quickly. (Partly a communication.)
1839. Thomas Kempson, Birmingham—Improved steam engine and boiler.
1871. George Collier, Halifax—Improvements in weaving plush by power, parts of which improvements are applicable when weaving other fabrics.
1879. Alphonse René Le Mire de Normandy, 67, Judd-street, Brunswick-square—Improvements in the manufacture of soap.

Patents on which the Stamp Duty of £50 has been Paid.

October 22nd.

495. David Crichton, Manchester—Arrangements and apparatus for producing continuous circular motion, giving a series of different velocities obtained from alternate motions, applicable to looms and other machines.
504. George Kennedy Geyelin, Camden-town—Improved machine for grinding pigments or other vegetable or mineral substances.
625. John Cameron, Manchester—Improvements in boilers for generating steam, and in feed-pumps, and in apparatus connected therewith.
646. George Fife, M.D., Newcastle-upon-Tyne—Improvements in steam and water gauges.

October 23rd.

579. Alfred Vincent Newton, 66, Chancery-lane—Improvements in machinery for cutting corn and other standing crops. (A communication.)
590. William Petrie, Woolwich—Improvements in the manufacture of sulphuric acid.
592. George Dixon, Dublin—Improvement in bleaching palm oil.
662. Peter Fairbairn, Leeds, and John Hargrave, Kirkstall—Improvements in machinery for opening, combing, and drawing wool, flax, and other fibrous materials.
721. Caleb Bloomer, West Bromwich—Improvements in the manufacture of anchors.
832. John Beale, East Greenwich—Improved arrangement of steam-engine, and an improved packing to be used therein.
1131. John Roberts, Upnor—Improvements in apparatus for preserving animal and vegetable matters, and for cooling wines and other liquids.

October 24th.

519. Mathew Fitzpatrick, Upper Cleveland-street, Fitzroy-square—Improvements in machinery or apparatus to be applied to locomotive engines and carriages for the prevention of accidents, and also in the manufacture and application of indestructible and non-rebounding cushions to be applied to the above, and for other similar purposes.
528. Halsey Draper Walcott, Boston—Improved mechanism or contrivance for cutting button-holes or slits in cloth or other material.
589. William Dantec, Liverpool—Improvements in preventing incrustation in steam-boilers.
749. Amory Hawkesworth, Abbey-road, Torquay—Improvements in life-boats.
801. John Trestrail, Southampton—Improvements in raising sunken vessels or other materials from under the water or in the sea, or to prevent them from sinking,
883. William Massingham, Ipswich—Improvements in carriages and apparatus for carrying the dead.

Patents on which the Third Year's Stamp Duty has been Paid.

October 16th.

425. William Roberts, Millwall, Poplar—Improvements in machinery for stopping and lowering cables and other chains.
450. George Heyes, Blackburn—Improvements in the manufacture of fancy woven or textile fabrics, and in the machinery or apparatus connected therewith.
465. Joseph Cundy, 21, Victoria-grove, Kensington—Improvements in hot-air stoves.
725. Julien François Belleville, Paris—Improvements in generating steam for producing motive-power or heat.
746. Joseph Cowen, Blaydon-burn, near Newcastle-upon-Tyne, and Thomas Richardson, Newcastle-upon-Tyne—Improvements in the manufacture of sulphuric acid.

October 17th.

422. George Randfield Tovell, Mistley, and John Mann, jun., Colchester—Improvements in the construction of ships and other vessels.
515. Robert William Mitcheson, Garford-street—Improvements in anchors.
584. George Thomas Selby, Smethwick Tube Works, Birmingham—Improvements in steam boilers.

October 18th.

453. Frederick Richards Robinson, Charlestown, Massachusetts, U.S.—Improvement in the gridiron or instrument for cooking steaks or other articles by broiling.
487. Archibald Slate, Dudley—Improvements in the manufacture and construction of cores and core bars used in the production of hollow castings in iron and other metals.
624. Edward Lord, Todmorden—Improvements in certain machinery to be used in preparing, spinning, and weaving cotton and other fibrous substances.

October 19th.

474. William Weild, Manchester—Improvements in looms for weaving certain descriptions of pile fabrics.

October 20th.

477. Henry Charles Gover, 9, Prince's-street, Bedford-row—Improvements in the apparatus used in printing with colours.
509. Charles Watson, 31, Rhodes-street, Halifax—Improvements in ventilation.

October 25th.

524. Charles Rowley, Birmingham—Improvements in nails.
525. Myer Myers, Maurice Myers, and William Hill, Birmingham—Improvements in pens and penholders.
538. Alfred Charles Hervier, Paris—Improvement in the application of centrifugal force to propelling on water.
582. James Sinclair, Stirling—Improvements in engines to be worked by steam, air, or water, the said improvements being also applicable to pumps.

WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

No. in the Register.	Date of Registration.	Title.	Proprietors' Name.	Address.
3770	October 19.	Combined Expanding Carriage Bow Spring	Wheeler, Kinder, & Robinson	Leicester.
3771	„ 22.	"The Kaloped," or Self-adjusting Colosh	Adolph Stargardter	4, Mitre-street, Aldgate.
3772	„ 22.	Dies of Vices, for holding Tubes or other Circular Articles	Samuel Garside	Ashton-under-Lyne.
3773	„ 24.	Stirrup	Fairbanks and Lavender	Walsall.
3774	„ 25.	Billiard Bagatelle Table	Samuel Twist	Birmingham,
3775	„ 25.	The Perflated Coat	Jamer Fairman	4, Bishopgate-street Within.
3776	„ 31.	A Wheel Roller for Clod-Crushers	William Tasker and Charles Haslem	Newbury. Reading.